

# THE PREVENTION OF CRIPPLING

AT a luncheon held on July 22nd Mr. Jackson Burrows spoke of the work of the Central Council for the Care of Cripples. Mr. Bramwell was in the Chair and in introducing the speaker he said that as a subject was more closely examined it became more complicated and not more simple. To a layman this was the case where the influences of heredity and environment were concerned, and Mr. Bramwell suggested the analogy of architects' plans, which in the hands of workmen would be translated into a house or ship; it depended on the workmanship whether it was a good or bad house or ship. He thought the terms "design and workmanship" might be more comprehensible to many people than "nature and nurture."

Mr. Jackson Burrows first dealt with the eugenic aspects of crippling. "I propose," he said, "to start with a couple of definitions, which I am afraid is a dangerous beginning as inviting somnolence or stimulating revolt.

First, it may, or may not, have occurred to you what is the derivation of the word 'cripple.' This is supposed to be a corruption of the word 'creeples,' a person who creeps, but for our purpose we ought perhaps to include a wider range of persons, namely all those who have not full use of their skeleton or muscles. You will find that our interest extends also to those who might lose the full use of these structures, failing treatment, namely potential cripples.

The other word that I want to define is 'orthopaedics.' Now this is not, as is so often supposed, a mixture of Greek and Latin, having something to do with the feet, but is derived from two Greek words meaning the straight child. So you will see that the emphasis is on health and not on disease, and on prevention as well as on cure. For many years orthopaedic surgery has been understood to mean the treatment of adults as well as children. I define the word 'orthopaedics' because it has to do with the medical side of the welfare of cripples. There are also big administrative and educational sides of

this work, and its success depends largely on the extent of the co-operation between non-medical and medical workers. It is important to realize that only a small minority of cases of crippling are associated with mental defect; and that it is usually possible to render even the severely crippled useful and happy citizens. My talk to-day will be concerned with prevention of crippling, with due reference to the eugenic question, and the ways in which established cripples can be helped.

One cannot discuss the prevention of crippling without saying something about the causes.

1. *Congenital infection.* Syphilis alone requires mention. Congenital syphilis never was a common cause of crippling: it is now a very rare one, in consequence of the vast diminution in the incidence of the disease in the last fifty years from better education and better treatment.

2. *Congenital disturbance of development.* One example is club-foot, which is a special deformity quite unlike that which appears on the wrappers of certain detective novels; another is congenital dislocation of the hip. Manifest familial occurrence of these conditions is exceptional, and it is doubtful if the question of forbearance from childbirth should often arise. There are numerous conditions, notably of the hands and of the feet, which are commonly hereditary, but most of them are insufficiently important to justify eugenic control.

3. *Congenital predisposition.* There are certain crippling diseases to which patients are born with a predisposition. One example is haemophilia, the scourge of certain dynasties. Here as you know there is a sex linkage, the women transmitting the disease and some of the sons showing its manifestations. Another example is one of the diseases in which the bones are unduly brittle. There are several curious and tragic forms of paralysis which slowly progress until they become so generalized as to result in death. Many of these are hereditary, but most

members of affected families are seemingly unaffected, so that eugenic methods would therefore be difficult to enforce, though there is an almost unanswerable case for their application in certain instances. All these diseases are relatively uncommon, and there remains the fact that very few crippling conditions are hereditary and therefore claimants for eugenic control.

4. *Environmental diseases.* It is obvious that diseases arising from a bad environment might be controlled by eugenic methods so applied as to prevent the birth of children into a bad environment, but in fact the better way is to alter the environment, or, if this is impossible, to modify its effects. In fact the incidence of wholly or partially environmental diseases has been enormously diminished by these other methods. A case in point is rickets, which in our lifetime has been a very common cause of crippling; nowadays a severe case of rickets is almost a rarity. Surgical tuberculosis was formerly one of the great causes of crippling. It is still an important cause but it has greatly diminished, largely because of better habits of life. There is unfortunately every expectation that this war, like others, will increase its incidence. About one-fifth of cases in this country we know to be due to the drinking of infected milk, and the corollary is that one-fifth of all cases of tuberculosis of bones and joints could be eliminated if pasteurization of all milk were enforced, as it is in some parts of the world. It seems paradoxical that, before the war, the Government should have instituted a widespread campaign for increasing the consumption of milk, without taking effective steps to ensure that this should be rendered harmless. The dangers of a bad milk supply are no less real, if less obvious, than those of a bad water supply.

5. *Rheumatism.* Under this head we have a varied group of conditions some of which may be described as crippling. They are so widespread as to constitute an important economic, as well as social, problem; and in spite of a large amount of research the prevention and treatment must still be regarded as notoriously unsatisfactory as a whole.

6. *Infantile paralysis.* Although the cause of this condition is known there is at present no satisfactory method of prevention, in spite of much research. The disease is notifiable, but its curious epidemic behaviour does not readily lend itself to control. Early and prolonged orthopaedic treatment is exceedingly important for the prevention of deformities and the improvement of function. At one time this treatment was greatly neglected, and in many localities this is unfortunately still the case. In some areas the patient is the responsibility of one local authority while he remains infectious, and of another when he ceases to be infectious; this does not aid efficient treatment.

7. *Accidents.* Domestic accidents form an important group. The incidence of accidents due to industrial processes and to the motor car is more easily controlled. Industrial accidents have been greatly diminished by factory legislation, but there is still no room for complacency. With the toll of the roads you will be only too familiar. Much of the crippling from accidents arises from severe fractures, the treatment of which, contrary to common supposition, may be very difficult. An attempt is being made at the present time to improve the organization of fracture treatment so that the patient should come as early as possible under the care of an expert working with suitable facilities and able to supervise treatment until recovery is complete.

8. *Legislation.* You will be surprised at my including legislation as a cause of crippling, especially as I have already referred to legislative activities which have the reverse effect. The defects in the Workmen's Compensation and Employers' Liability Acts do in fact create cripples by producing a state of mind which prevents recovery of injured workmen who would otherwise be restored to their former powers. Time forbids my elaborating this statement, but it would not be contested by anybody who has to do with treatment of injured workmen or with the medico-legal problems which arise. Fortunately the whole question of workmen's compensation is now under consideration by a Royal Commission, before which the Central

Council for the Care of Cripples has given evidence. Mr. R. C. Elmslie, chairman of the Council's executive committee, was a member of the Commission until, a year ago, his much regretted death left the Commission without a single medical member. In this country workmen's compensation makes no provision for medical treatment, and for this the injured workman is largely dependent on charity."

Mr. Jackson Burrows then went on to speak of the work of the Central Council for the Care of Cripples, which, he said, was a voluntary body concerned primarily with the prevention of crippling, with its cure or physical amelioration in cases where it has not been prevented, and finally education, vocational training, employment and general welfare coupled with medical treatment. Serious work for cripples was only a thing of the last fifty years and it was not until after the last war that active measures were taken, the most valuable being the establishment of school medical inspection and maternity and child welfare centres. Theoretically this should mean that a potential cripple could be picked out at any time between birth and leaving school. It was important that after school crippled children should pass on to vocational training centres, but, though there were centres doing excellent work, there were too few of them.

Vocational training was also applied to adult cripples, though these were less adaptable than children. Many cases being the result of accidents, the patients could not always be sufficiently restored for return to their own work, but in many other instances gradual work at a rehabilitation centre enabled the man to return to his own trade. Unfortunately there were only two or three of these in the whole country.

The system for the medical care of cripples which has been sponsored by the Central Council was one in which the country was divided into areas, each having a central orthopaedic or general hospital with outlying clinics in the surrounding country, so that, after a period in hospital, treatment could be continued near the patient's home. Local authorities, which varied greatly in the

extent to which they carried out their legal obligations, were not obliged to do anything for non-tuberculous cripples, unless destitute. The Central Council co-ordinated voluntary and official effort and attempted to secure official action in fields which were closed to voluntary activity. The Central Council also administered the Lord Nuffield Fund for Cripples.

### Discussion

Replying to a number of questions at the close of the talk, Mr. Jackson Burrows said that air-raid casualties had not entailed a very great deal of extra work; he reminded his audience that they did not exceed the number of road accidents. As to the proportion of crippled children in the population, these amounted to between five and ten per thousand, including persons needing treatment and who could be cured. No relationship had been established between congenital deformities and attempted abortion; reliable statistics of the latter were difficult to obtain.

It was too soon to say what would be the effects of evacuation on crippling diseases. The break in treatment was always unfortunate, and, as far as after-care was concerned, sight had been lost of a number of patients. From the financial point of view there was frequently a difference of opinion as to whether the home or evacuation area local authority was responsible for the cost of treatment. Another query referred to the financing of rehabilitation centres for injured workmen; these were almost entirely run by employers, such as the London Midland and Scottish Railway and the Midland Colliery Owners Association, who carried their own insurance. It was not possible to interest the insurance companies in the financing of such schemes because under the present law they were compelled to lower the rate of premium if they made more than a certain profit out of workmen's compensation. It was therefore not worth their while to assist in the rapid restoration to work of the bulk of injured workmen.

Mr. Bramwell thanked the speaker most warmly for a very interesting lecture.